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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/925,475	08/10/2001	Kinzo Korehisa	1155-0224P	6148

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EXAMINER

BISSETT, MELANIE D

ART UNIT PAPER NUMBER

1711

DATE MAILED: 05/29/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/925,475

Applicant(s)

KOREHISA ET AL.

Examiner

Melanie D. Bissett

Art Unit

1711

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 14 March 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☐ Claim(s) 5-22, 26-28 and 30-39 is/are pending in the application.
- 4a) Of the above claim(s) 5-21, 26 and 27 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 22, 28 and 30-39 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413) Paper No(s) \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

### **DETAILED ACTION**

1. The rejections based on 35 USC 102 and 35 USC 103 have been withdrawn or altered based on the applicant's amendments. New rejections based on 35 USC 103 are also presented below.

### ***Election/Restrictions***

2. In response to the applicant's argument that the process claims should be rejoined based on *In re Ochiai*, it is noted that the process claims will be rejoined at a later time if the product claims are found to be allowable and if the process claims are amended to recite all of the limitations of the allowable independent product claim. Because it is the examiner's position that the product claims are not allowable at this time, the examiner's reasons for restriction is maintained. Also, it is noted that a separate search strategy would be needed for the process and product claims at this time, since the process involves steps not required in the product claims. In response to the applicant's arguments that the two process groups should be examined together since they fall within the same class and subclass, the examiner points to the reasoning in the restriction requirement stating that separate search strategies would be needed for each process (paragraph 4, Paper No. 6). The requirement for separate search strategies provides support for undue burden on the examiner.

3. This application contains claims drawn to an invention nonelected with traverse in Paper No. 7. A complete reply to the final rejection must include cancellation of nonelected claims or other appropriate action (37 CFR 1.144) See MPEP § 821.01.

***Claim Rejections - 35 USC § 102***

4. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.
5. Claim 33 is rejected under 35 U.S.C. 102(b) as being anticipated by Gokuraku et al.
6. From a prior Office action:

16. Gokuraku discloses foamed polypropylene base resins, where the base resin has a melt tension of 10 gf or above and a melt flow rate of at least 0.5 g/10 min (abstract). Peroxides are added to the polypropylene resins to crosslink to a gel fraction of less than 1% (col. 6 lines 18-41). Peroxides include bis(4-butylcyclohexyl)peroxydicarbonate (col. 7 lines 1-7). The starting polypropylene compounds can be mixed with polypropylene or other resins (col. 7 lines 49-67).

7. Additionally, it is noted that new claim 33 has an intended use for a foamed sheet. Although the foams of Gokuraku are intended for blow molded articles, it is the examiner's position that the compositions are capable of being formed into a foamed sheet. Therefore, it is the examiner's position that the polypropylene compositions are the same regardless of intended use, and the compositions of Gokuraku anticipate the claim.

***Claim Rejections - 35 USC § 103***

8. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.
9. Claims 34-36 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gokuraku et al. in view of Akzo Nobel.
10. From a prior Office action:

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24. Gokuraku applies as above, preferring the use of polypropylene resins as base resins having melt flow rates above 0.5 g/10 min. and describing the mixing of peroxide with polypropylene resin at elevated temperatures to a gel fraction less than 1% (col. 6 lines 18-41). However, the reference does not specifically mention melt flow rate of the starting polypropylene polymer, the temperature for combining the peroxide and polypropylene, or the weight percentage of peroxide needed. Akzo teaches that polypropylene compositions having improved melt strength can be formed by melt mixing a peroxydicarbonate with a polypropylene having a melt flow index above 0.5 g/10 min. in an extruder or kneader at a temperature between 170 and 225 °C, and extruding the mixture (p. 4 line 2-31). The peroxydicarbonate is used in amounts of 0.1-10 meq (0.04-4 g peroxide / 100 g polypropylene) (p. 6 lines 17-21). Since Gokuraku is also concerned with melt properties of the compositions, it is the examiner's position that it would have been prima facie obvious to use the parameters of Akzo's invention in the formation of Gokuraku's base resin to form compositions of improved melt strength.

25. Gokuraku applies as above, teaching the use of certain peroxides *and the like*, but failing to mention the use of dicetyl peroxydicarbonate. Akzo prefers the use of certain peroxides that are solid at room temperature, including bis (4-t-butylcyclohexyl) peroxydicarbonate and dicetyl peroxydicarbonate (col. 6 lines 7-12). Since the peroxides are taught as equivalents and are both solids at room temperature, it is the examiner's position that it would have been prima facie obvious to use dicetyl peroxydicarbonate in Gokuraku's invention in place of bis (4-t-butylcyclohexyl) peroxydicarbonate in the expectancy of forming compositions of equally improved melt strength.

11. Claims 22, 28, 33, and 37-39 are rejected under 35 U.S.C. 103(a) as being unpatentable over Raetzsch et al. in view of Gokuraku et al.

12. Raetzsch discloses a blend of modified polypropylene polymer with an unmodified polypropylene polymer, where the composition is used for blow molding or injection molding (abstract). Preferred combinations of materials include 75-98% by weight of the unmodified propylene polymer and 2-25% by weight of modified propylene polymer (col. 2 lines 45-57). The compositions may be foamed to form foamed articles (col. 6 lines 54-61). Although the reference teaches that the modified propylene polymer should have a melt index of preferably 0.25-15 g/10 min (col. 4 lines 50-61), the melt tension and gel fraction of the modified polymer are not noted.

13. Gokuraku teaches modified polypropylene compositions for blow molding having a melt tension of 10 gf or more, a melt flow rate of greater than 0.5 g/10 min, and a gel fraction of less than 1% (abstract; col. 6 lines 18-41). The propylene polymers are modified by mixing a peroxide with a starting polypropylene at an elevated temperature (col. 6 lines 18-41). Peroxides are added to the polypropylene resins to crosslink to a gel fraction of less than 1% (col. 6 lines 18-41). Peroxides include bis(4-butylcyclohexyl)peroxydicarbonate (col. 7 lines 1-7). The starting polypropylene compounds can be mixed with polypropylene or other resins (col. 7 lines 49-67). The foams of Gokuraku's invention have increased expansion ratio, wall thickness, and surface smoothness (col. 3 lines 33-39). Therefore, it is the examiner's position that it would have been prima facie obvious to use the modified polypropylene of Gokuraku's invention in the blend composition of Raetzsch's teaching to form a molded foam having improved expansion ratio, wall thickness, and surface smoothness.

14. Additionally, it is noted that new claim 33 has an intended use for a foamed sheet. Although the foams of Raetzsch are intended for blow molded articles, it is the examiner's position that the compositions are capable of being formed into a foamed sheet.

15. Claims 22, 28, and 30-39 are rejected under 35 U.S.C. 103(a) as being unpatentable over Raetzsch et al. in view of Akzo Nobel.

16. Raetzsch discloses a blend of modified polypropylene polymer with an unmodified polypropylene polymer, where the composition is used for blow molding or

injection molding (abstract). Preferred combinations of materials include 75-98% by weight of the unmodified propylene polymer and 2-25% by weight of modified propylene polymer (col. 2 lines 45-57). The compositions may be foamed to form foamed articles (col. 6 lines 54-61). Although the reference teaches that the modified propylene polymer should have a melt index of preferably 0.25-15 g/10 min (col. 4 lines 50-61), the melt tension and gel fraction of the modified polymer are not noted.

17. Akzo Nobel discloses polypropylene compositions having improved melt strength formed by melt mixing a peroxydicarbonate with a polypropylene having a melt flow index above 0.5 g/10 min. in an extruder or kneader at a temperature between 170 and 225 °C, and extruding the mixture (p. 4 line 2-31). The peroxydicarbonate is used in amounts of 0.1-10 meq (0.04-4 g peroxide / 100 g polypropylene) (p. 6 lines 17-21). Both bis (4-t-butylcyclohexyl) peroxydicarbonate and dicetyl peroxydicarbonate are exemplified (p. 9 lines 19-22). The modified polypropylene compositions have melt flow indices within the applicant's claimed range (Table 1). Since the same materials and processes are used in the reference and present application, it is the examiner's position that the modified polypropylene compositions of Akzo's invention would inherently possess the applicant's claimed melt tension and gel fraction. Akzo also teaches foaming the compositions (p. 8 line 29-p. 9 line 2). It is the examiner's position that it would have been prima facie obvious to use the modified polypropylene polymers of Akzo's invention in Raetzach's compositions to improve the melt strength of the compositions during processing.

18. Additionally, it is noted that new claim 33 has an intended use for a foamed sheet. Although the foams of Raetzsch are intended for blow molded articles, it is the examiner's position that the compositions are capable of being formed into a foamed sheet.

### ***Response to Arguments***

19. Applicant's arguments with respect to claims 1-4, 22-25, and 28-29 have been considered but are moot in view of the new ground(s) of rejection.

20. In response to the applicant's argument that Gokuraku teaches away from the present invention, it is noted that Gokuraku does not teach which ratios of modified PP to unmodified PP would be "too high" to impede the characteristic properties of the modified PP. Gokuraku has been used in this Office action as a secondary reference for teaching the benefits of a specific modified polypropylene resin. Since the reference teaches that the modified polypropylene may be blended with unmodified polypropylene and the reference does not indicate a specific ratio that impedes the benefits of the modified polypropylene, it is the examiner's position that the combination of references is proper.

21. Regarding claim 33, the examiner has noted above that the claim includes the limitation "for a foamed sheet", which is an intended use for the composition. It is the examiner's position that the compositions which are capable of being formed into a foamed sheet would anticipate the limitation "for a foamed sheet", since the limitation does not limit the contents of the composition.



22. Regarding the applicant's arguments that the current claims differ from the prior art by having excellent appearance, uniformity of cells, and food hygienic properties, it is noted that such properties are not present in the claims.

23. In response to the applicant's arguments of unexpected results, the rejections based on 35 USC 103 have been altered to use a primary reference teaching the blending of modified and unmodified polypropylene. The combination of references teaches the specific modified polypropylene of the invention with an amount of unmodified polypropylene. Since the comparison examples of the specification show only modified polypropylene, they do not represent the closest prior art.

### ***Conclusion***

24. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

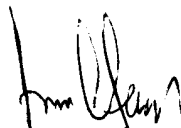
the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Melanie D. Bissett whose telephone number is (703) 308-6539. The examiner can normally be reached on M-F 8-4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, James Seidleck can be reached on (703) 308-2462. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9310 for regular communications and (703) 872-9311 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0661.

mdb  
May 23, 2003

  
James L. Seidleck  
Supervisory Patent Examiner  
Technology Center 1700